

IN THE CLAIMS:

All claims currently pending and under consideration in the referenced application are shown in the listing of claims and will replace all prior versions and listings of claims in the application. No new matter has been added. Please enter these claims as amended.

Listing of the Claims:

1-45. (Cancelled).

46. (New) A method for selecting a pig for breeding by identifying a pig having a paternally imprinted quantitative trait locus (QTL) associated with larger muscle mass and/or decreased fat deposition such that when the pig is used in a breeding program, the offspring of the pig that inherit said QTL from the male parent have larger muscle mass and/or decreased fat deposition compared to controls wherein the identification of the pig comprises:

identifying the presence of the paternally imprinted QTL by detecting one or more genetic markers selected from the group consisting of genetic markers linked to the paternally imprinted QTL on chromosome 2 of the pig, genetic markers in linkage disequilibrium with the paternally imprinted QTL on chromosome 2 of the pig, genetic markers within the paternally imprinted QTL on chromosome 2 of the pig that represent the actual causal mutation that results in larger muscle mass and/or reduced fat deposition, and combinations of any thereof;

wherein the location of the paternally imprinted QTL is indicated by a genomic region comprising the genetic markers Swr2516, Swc9, S22623, and Swr783 on chromosome 2 of the pig;

wherein the QTL is present on chromosome 2 of the pig at position 2p1.7; and

wherein the identification of the pig having the paternally imprinted QTL associated with larger muscle mass and/or decreased fat deposit selects the pig for breeding.

47. (New) The method according to claim 46 wherein the paternally imprinted QTL comprises at least a part of an insulin-like growth factor-2 gene (IGF-2).

48. (New) The method according to claim 47, wherein the paternally imprinted QTL comprises at least a part of the insulin-like growth factor-2 gene (IGF-2) and a genetic marker characterized as nt241(G-A) or as Swc9.